CLAIMS

What is claimed is:

1. A method of limiting dirty entries in a cache memory, comprising:

  determining the number of dirty entries in the cache memory; and

  evicting at least one dirty entry from the cache memory when the number of

  dirty entries exceeds a predetermined threshold.

2. The method of claim 1, further comprising evicting all dirty entries from the

cache memory when the number of dirty entries exceeds a predetermined threshold.

3. The method of claim 1, further comprising varying the predetermined threshold.

4. The method of claim 1, further comprising setting the predetermined threshold to

a fixed value.

5. The method of claim 1, further comprising setting the predetermined threshold

by software.

6. The method of claim 1, further comprising:

  incrementing a counter when an entry in the cache memory transitions to a

  modified state;

  decrementing the counter when a modified entry is evicted from the cache

  memory; and

  evicting at least one modified entry from the cache memory when a count in

  the counter exceeds the predetermined threshold.

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7. A method of limiting dirty entries, in a first cache memory in a first cache hierarchy, that have transferred from another cache hierarchy, comprising:

    determining the number of dirty entries in the first cache memory that have transferred from another cache hierarchy; and

    evicting from the first cache memory, at least one dirty entry that has transferred from another cache hierarchy, when the number of dirty entries that have transferred from another cache hierarchy exceeds a predetermined threshold.

8. The method of claim 7, further comprising:

    marking an entry in the first cache memory as a cache-to-cache entry when the entry is transferred to the first cache memory from another cache hierarchy;

    incrementing a counter when a cache-to-cache entry in the first cache memory transitions to a modified state;

    decrementing the counter when a modified cache-to-cache entry in the first cache memory is evicted from the first cache memory; and

    evicting a modified cache-to-cache entry from the first cache memory when a count in the counter exceeds the predetermined threshold.

9. A method of limiting dirty entries, in a first cache memory in a first cache hierarchy, that have transferred from another cache hierarchy, comprising:

    marking entries in the first cache hierarchy that have transferred from another cache hierarchy;

    determining the number of dirty entries in the first cache memory; and

    evicting from the first cache memory, a dirty entry that has transferred from another cache hierarchy, when the number of dirty entries in the first cache memory exceeds a predetermined threshold.

10. A cache memory system, comprising:

  a counter, wherein a count in the counter indicates a total number of modified lines in the cache memory system.

11. A cache memory system in a first cache hierarchy, comprising:

  storage for data that indicates whether an entry has been transferred from a cache hierarchy other than the first cache hierarchy.

12. The cache memory system of claim 11, further comprising:

  a counter, wherein a count in the counter indicates a total number of entries in the cache memory system that are modified and that have been transferred from a cache hierarchy other than the first cache hierarchy.